



LUNDS
UNIVERSITET

Forskning vid Avdelningen för riskhantering och samhällssäkerhet – En översikt

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Forskningsöversikt



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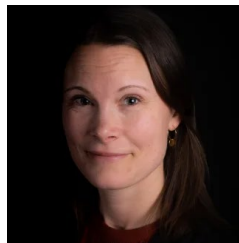
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Tove
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- Riskanalys / Riskbedömning
- Riskstyrning
- Katastrofriskhantering / Kapacitetsutveckling
- Systems safety / Resilience engineering
- Critical Infrastructure Resilience
- Riskperception / Beteende
- Krishantering / Ledning & samverkan

Risikanalyt / Riskbedömning

■ Konceptuella studier

- Hassel, H., & Cedergren, A. (2019). Exploring the Conceptual Foundation of Continuity Management in the Context of Societal Safety. *Risk Analysis*, 39(7), 1503-1519.
- Lindbom, H., Tehler, H., Eriksson, K., & Aven, T. (2015). The capability concept – On how to define and describe capability in relation to risk, vulnerability and resilience. *Reliability Engineering & System Safety*, 135, 45-54.

■ Experiment och riskbedömning

- Lindbom, H., & Tehler, H. (2019). Striking a balance between the costs and benefits of increasing response capability: A microworld study of the effect of capability assessments. *International Journal of Disaster Risk Reduction*, 41.
- Månsson, P., Abrahamsson, M., & Tehler, H. (2019). Aggregated risk: an experimental study on combining different ways of presenting risk information. *Journal of Risk Research*, 22(4), 497-512.

■ Specifika hot, ex. översvämningar

- Haghigatafshar, S., Becker, P., Moddemeyer, S., Persson, A., Sörensen, J., Aspegren, H., and Jönsson, K. (2020). 'Paradigm shift in engineering of pluvial floods: From historical recurrence intervals to risk-based design for an uncertain future'. *Sustainable Cities and Society*, 102317.



Riskstyrning (risk governance)

■ Riskstyrning och hållbar utveckling

- **Becker, Per** (2020). 'Fragmentation, commodification and responsabilisation in the governing of flood risk mitigation in Sweden'. *Environment and Planning C*.
- **Becker, Per** (2014) *Sustainability Science: Managing Risk and Resilience for Sustainable Development*, Amsterdam and Oxford: Elsevier (monograph)

■ Riskstyrning och designforskning

- **Cedergren, A., & Tehler, H.** (2014). Studying risk governance using a design perspective. *Safety Science*, 68, 89-98.

■ Riskstyrning och samhällsviktig verksamhet

- **Cedergren, A., Johansson, J., & Hassel, H.** (2018). Challenges to critical infrastructure resilience in an institutionally fragmented setting. *Safety Science*, 110, 51-58.
- **Cedergren, A.** (2013). Designing resilient infrastructure systems: a case study of decision-making challenges in railway tunnel projects. *Journal of Risk Research*, 16(5), 563-582.



Katastrofriskhantering / Kapacitetsutveckling

■ Kapacitetsutveckling

- Hagelsteen, Magnus & Becker Per (2019) 'Systemic problems of capacity development for disaster risk reduction in a complex, uncertain, dynamic, and ambiguous world', *International Journal of Disaster Risk Reduction* 36: 101102.
- Hagelsteen, Magnus & Becker Per (2013) 'Challenging disparities in capacity development for disaster risk reduction', *International Journal of Disaster Risk Reduction* 3: 4-13

■ Katastrofriskhantering & Klimatanpassning

- Rivera, C., Tehler, H., & Wamsler, C. (2015). Fragmentation in disaster risk management systems: A barrier for integrated planning. *International Journal of Disaster Risk Reduction*, 14, 445-456.
- Becker, Per; Abrahamsson, Marcus and Hagelsteen, Magnus (2013) 'Parallel structures for disaster risk reduction and climate change adaptation in the SADC region', *Jàmhá: Journal of Disaster Risk Studies* 5(2): 1-5
- Lama, P., Hamza, M., & Wester, M. (2020) 'Gendered dimensions of migration in relation to climate change', *Climate and Development*, 13:4, 326-336.



Systems safety / Resilience engineering

■ Resilience engineering - generellt

- Patriarca, R., Bergström, J., Di Gravio, G., & Costantino, F. (2018). Resilience engineering: Current status of the research and future challenges. *Safety Science*, 102, 79-100.
- Bergström, J. (2018). An archaeology of societal resilience. *Safety Science*, 110, 31-38.
- Bergström, J., van Winsen, R., & Henriqson, E. (2015). On the rationale of resilience in the domain of safety: A literature review. *Reliability Engineering & System Safety*, 141, 131-141.

■ Flyg

- Adriaensen, A., Patriarca, R., Smoker, A., & Bergström, J. (2019). A socio-technical analysis of functional properties in a joint cognitive system: a case study in an aircraft cockpit. *Ergonomics*, 62(12), 1598-1616.

■ Sjukvård

- Neuhaus, C., Lutnæs, D. E., & Bergström, J. (2019). Medical teamwork and the evolution of safety science: a critical review. *Cognition, Technology & Work*, 22(1), 13-27.

■ Sjöfart

- Patriarca, R., & Bergström, J. (2017). Modelling complexity in everyday operations: functional resonance in maritime mooring at quay. *Cognition, Technology & Work*, 19(4), 711-729.

Critical Infrastructure Resilience

- CenCIP (Centre for Critical Infrastructure Protection research), 2015-2024
- Beroenden och kritisk infrastruktur – resiliens och påverkan på samhälle
 - Svegrupp, L., Johansson, J., Hassel, H., (2019). Integration of Critical Infrastructure and Societal Consequence Models: Impact on Swedish Power System Mitigation Decisions. *Risk Analysis*, Vol 39, No. 9, pp. 1970-1996.
- Tvärssektoriell riskstyrning – Utmaningar och möjligheter
 - Sonesson, T. R., Johansson, J., & Cedergren, A. (2021). Governance and interdependencies of critical infrastructures: Exploring mechanisms for cross-sector resilience. *Safety Science*, 142, 105383.
- Översvämning och klimatanpassning av kritisk infrastruktur
 - Arvidsson, B., Johansson J., Guldåker, N., (2021). Critical Infrastructures, GIScience and Risk Governance: A literature review of synergistic research opportunities, *Reliability Engineering and System Safety*, 213, 107741. DOI: 10.1016/j.ress.2021.107741
 - Nasr, A., Johansson, J., Ivanov, O., Björnsson, I., Honfi, D. (2022). Risk-based multi-criteria decision analysis method for considering the effects of climate change on bridges. *Structure and Infrastructure Engineering*, pp. 1-14

Risk perception / Mänskligt beteende

■ Generellt

- Wester, M. (2015) Mänskligt beteende i katastrofer, Katastrofriskreducering : Perspektiv, praktik, potential. Becker, P. & Baez Ullberg, S. (red.). Studentlitteratur, s. 105-121.

■ Övervakning

- Wester, M., & Giesecke, J. (2019). Accepting surveillance – An increased sense of security after terror strikes? Safety Science, 120, 383-387.

■ Smittspridning

- Wester, M., & Giesecke, J. (2019). Ebola and healthcare worker stigma. Scand J Public Health, 47(2), 99-104.

■ Kön

- Becker, P. (2011) 'Whose risks? Gender and the ranking of hazards', Disaster Prevention and Management: An International Journal, 20(4): 423-433



Krishantering, ledning & samverkan

■ Studera kriser

- Bergström, J., Uhr, C., & Frykmer, T. (2016). A Complexity Framework for Studying Disaster Response Management. *Journal of Contingencies and Crisis Management*, 24(3), 124-135.

■ Återuppbyggnad efter katastrofer (recovery)

- Raju, E.; Becker, P. and Tehler, H. (2017) 'Exploring interdependencies and common goals in disaster recovery coordination', *Procedia Engineering* 212: 1002-1009.

■ Experiment och krishantering

- Frykmer, T., Tehler, H., Uhr, C., & Wester, M. (2021). Advancing the Field of Disaster Response Management: Toward a Design Science Approach. *International Journal of Disaster Risk Science*. 12(2), 220-231.

■ Att hantera osäkerhet

- Uhr, C., Tehler, H., & Wester, M. (2018). An empirical study on approaches to ambiguity in emergency and disaster response decision-making. *Journal of Emergency Management*, 16(6), 355-363.
- Rydmark, J., Kuylenstierna, J., & Tehler, H. (2020). Communicating uncertainty in risk descriptions: the consequences of presenting imprecise probabilities in time critical decision-making situations. *Journal of Risk Research*, 24(5), 629-644.



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